

Listing of Claims

This listing of claims will replace all prior versions and listing of claims in Application.

Claim 1 (CURRENTLY AMENDED): An implant assembly for treating proximal femur fractures and same side fractures of a shaft of a femur, including:

A) a unitary one piece intramedullary nail ~~being adapted in use for insertion into a medullary canal of said femur, said intramedullary nail comprising a head, an intermediate portion defining a long axis of said intramedullary nail and a knee end portion,~~
a first plurality of proximal holes and a first plurality of distal holes,

B) a targeting device connectable to said intramedullary nail comprising
~~a connecting end connectable to a connecting end of said intramedullary nail, a block of a second plurality of proximal holes and a block of a~~
second plurality of distal holes placed offset vertically and horizontally,

a) wherein ~~said head of said intramedullary nail has~~ a each of said first plurality of proximal holes defining a proximal centerline ~~of each of said first plurality of proximal holes~~ extending through centre of corresponding each of said second plurality of proximal holes of said targeting device and extendable through a midsection of a head portion and a neck portion of said femur, said proximal centerline intersects with said a long axis of said intramedullary nail defining a first plane of centre of each of said first plurality of proximal holes,

b) wherein ~~said intermediate portion of said intramedullary nail has a~~ each of said first plurality of distal holes defining a distal centerline ~~of each of said first plurality of distal holes~~ extending through centre of corresponding each of said second plurality of distal holes of said targeting device and extendable through a midsection of said shaft of said femur, said distal centerline intersects substantially perpendicular with said long axis of said intramedullary nail defining a second plane of centre of each of said first plurality of distal holes and ;

c) wherein said first plane of centre of each of first plurality of proximal holes intersects with said second plane of centre of each of first plurality of distal holes. ~~such that each of a plurality of proximal sliding hip pins is engagable in said midsection of said neck portion and said head portion through centre of each of said first plurality of proximal holes slidably and each of a plurality of distal locking screws is engagable in said midsection of said shaft through center of each of said first plurality of distal holes simultaneously without rotating said targeting device connected to said intramedullary nail.~~

Claim 2 - 17 (CANCELED)

Claim 18 (CURRENTLY AMENDED): An implant assembly of claim 2 1 , wherein ~~said~~ further comprising a plurality of proximal sliding hip pin , said plurality of proximal hip pin comprising a head part , a smooth part capable of slidably engaging for sliding within said first plurality of proximal holes of said intramedullary nail, ~~a plurality of barrels , a plurality of central large holes of a buttress plate~~ ; and a triflanged part with scalloped three flat equal surfaces up to 15 mm to 50 mm of span with mores taper towards leading end capable of

~~engaging firmly in bone tissue of said head portion and said neck portion of said femur.~~

Claim 19 -20 (CANCELED)

Claim 21 (CURRENTLY AMENDED): An implant assembly of claim 18 wherein said triflanged part is characterized having a plurality of holes of at least 2 mm diameter connecting a central cannulation of said proximal hip pin to allow injection of liquid cement or other augmentation material to augment the engagement of said triflanged part of said proximal hip pin in said head portion and said neck portion of said femur without hampering sliding of said smooth part within said first plurality of proximal holes of said intramedullary nail.

Claim 22 -23 (CANCELED)

Claim 24 (CURRENTLY AMENDED): An implant assembly of claim 21, wherein ~~each of said intramedullary nail and said plurality of proximal hip pins~~ has central cannulation.

Claim 25 -26 (CANCELED)

Claim 27 (CURRENTLY AMENDED): The implant assembly of claim 1, ~~said implant assembly~~ further comprising:

a buttress plate comprising a plurality of central large holes and a plurality of small holes ,

a plurality of barrels ,

~~a plurality of proximal sliding hip pins comprising a head, a smooth sliding~~

~~part and a triflanged part, said smooth sliding part engages slidably in corresponding one of said plurality of central large holes, corresponding one of said first plurality of proximal holes and preferably through corresponding one of said plurality of barrels, said triflanged part is capable of engaging firmly in bone tissue of said head portion and said neck portion of said femur, whereby said buttress plate provides additional support and platform to a greater trochanter and a lateral cortex of said femur and said barrels provide continuous smooth uniform gliding surface for controlled backward sliding of said smooth part, thereby said implant assembly is capable of maintaining engagement of said triflanged part in said head portion and neck portion of said femur and simultaneously capable of sliding of said smooth sliding part within said first plurality of proximal holes and said plurality of barrels leading controlled collapse of fracture fragments and bone to bone contact.~~

Claim 28 (CURRENTLY AMENDED): An implant assembly for treating proximal femur fractures and same side fractures of a shaft of a femur comprising:

A) a unitary one piece intramedullary nail connectable to a targeting device being adapted in use for insertion into a medullary canal, said intramedullary nail having a first plurality of proximal holes and a first plurality of distal holes head, an intermediate portion defining a long axis of said intramedullary nail and a knee end portion ,

a) wherein each of said head comprising a first plurality of proximal holes defining a proximal centerline of each of said first plurality of proximal holes extending through centre of corresponding each of a second plurality of proximal

holes of said targeting device and extendable through a midsection of a head portion and a neck portion of said femur, said proximal centerline intersects with said a long axis of said intramedullary nail defining a first plane of centre of each of said first plurality of proximal holes,

b) wherein each of said ~~intermediate portion of said intramedullary nail has a~~ first plurality of distal holes defining a distal centerline ~~of each of said first plurality of distal holes~~ extending through centre of corresponding each of a second plurality of distal holes of said targeting device and extendable through a midsection of a said shaft of said femur, said distal centerline intersects with said long axis of said intramedullary nail substantially perpendicular defining a second plane of centre of each of said first plurality of distal holes,

c) wherein said first plane of centre of each of first plurality of proximal holes intersects with said second plane of centre of each of first plurality of distal holes such a way that ~~each of a plurality of proximal sliding hip pins is engagable in said midsection of said neck portion and said head portion through centre of each of said first plurality of proximal holes slidably and each of a plurality of distal locking screws is engagable in said midsection of said shaft through center of each of said first plurality of distal holes simultaneously without rotating said intramedullary nail connected therewith said targeting device~~,

B) a buttress plate comprising a plurality of central large holes and a plurality of small holes,

C) a plurality of barrels,

D) a plurality of proximal sliding hip pins comprising a head, a smooth sliding part and a triflanged part, ~~said smooth sliding part engages slidably in~~

~~corresponding one of said plurality of central large holes, corresponding one of said first plurality of proximal holes and preferably through corresponding one of said plurality of barrels, said triflanged part is capable of engaging firmly in bone tissue of said head portion and said neck portion of said femur~~

Claim 29 -30 (CANCELED)

Claim 31 (WITHDRAWN , CURRENTLY AMENDED): A method of treating a fracture located between a head of a femur bone and a medullary canal of said femur utilizing a buttress plate with a plurality of barrels in combination with a one piece unitary intramedullary nail connectable to a targeting device, said method comprising the steps of :

- a) making a first minimal incision and a first aperture at tip of a greater trochanter connecting to a said medullary canal of said femur bone;
- b) inserting from said first aperture said ~~unitary~~ intramedullary nail into said medullary canal, said intramedullary nail comprising:

- 1) a first plurality of proximal holes defining a proximal centerline extending through centre of corresponding each of a second plurality of proximal holes of said targeting device and extendable through a midsection of a head portion and a neck portion of said femur , said proximal centerline intersects with a long axis of said intramedullary nail defining a first plane of centre of each of said first plurality of proximal holes.

- 2) a first plurality of distal holes defining a distal centerline extending through centre of corresponding each of a second plurality of distal

holes of said targeting device and extendable through a midsection of a shaft of said femur, said distal centerline intersects substantially perpendicular with said long axis of said intramedullary nail defining a second plane of centre of each of said first plurality of distal holes and;

3) wherein said first plane of centre of each of first plurality of proximal holes intersects with said second plane of centre of each of first plurality of distal holes;

~~a first plurality of proximal holes defining a first plane extending through centre of corresponding each of a second plurality of proximal holes of a targeting device and extendable through a midsection of a head and a neck of said femur,~~

~~—a first plurality of distal holes defining a second plane extending through centre of corresponding each of a second plurality of distal holes of said targeting device and extendable through a midsection of a shaft of said femur, said first plane and said second plane intersects at a longitudinal axis of said intramedullary nail;~~

- c) making a second minimal incision and a plurality of drill holes in a lateral cortex of said femur targeting each of said first plurality of proximal holes and said midsection of said head and said neck guided by a plurality of sharp short guide pins to receive a plurality of proximal sliding hip pins ;
- d) sliding a narrow obtuse end of said buttress plate on surface of said greater trochanter and said lateral cortex through said first minimal incision such that a plurality of central large holes of said buttress plate rests on said plurality

- of sharp short guide pins through a slit in said plurality of central large holes;
- e) positioning a plurality of barrels in said plurality of central large holes guided by said plurality of short sharp guide pins;
- f) inserting by gentle hammering each of said sliding proximal hip pins through corresponding one of said central large holes and one of said first plurality of proximal holes such that said proximal hip pin is extendable across the fracture slidably and engagable firmly into the said neck portion and the said head portion of said femur and capable of impaction of said fracture.

Claim 32 (WITHDRAWN, PREVIOUSLY PRESENTED): The method of claim 31 further comprising steps of:

inserting at least one of plurality of distal locking screws engagable to said lateral cortex and a medial cortex of said femur bone through one of plurality of small holes of said buttress plate and one of the said first plurality of distal holes of said intramedullary nail.

Claim 33 (New) : An implant assembly of claim 1, wherein a short length version of said intramedullary nail has a anterior curvature in a tail portion, a full length version of said intramedullary nail has said anterior curvature in a shaft portion.

Claim 34 (New): An implant assembly of claim 1, wherein a connecting end of said targeting device is short and compact.

Claim 35 (New): An implant assembly of claim 1, wherein a thigh end of said intramedullary nail is having smaller diameter.

Claim 36 (New) : An implant assembly of claim 18, wherein said smooth part of at least one of said plurality of proximal hip pins is having a shape other than round like a hexagonal or a key shape.

Claim 37 (New) : An implant assembly of claim 1, wherein at least one of said first plurality of proximal holes is having a shape other than round like a hexagonal or a key hole shape.

Claim 38 (New): An implant assembly of claim 27, wherein said buttress plate has a narrow obtuse end.

Claim 39 (New): An implant assembly of claim 27, wherein at least one of said plurality of central large holes is having a slit of at least 2 millimeter.